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AUTHOR Hirth, Marilyn A.

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ABSTRACT

Although the federal Goals 2000 program provides supplemental funding for systemic education reform, states' fiscal abilities to finance systemic reform are stressed. This paper presents findings of a study that analyzed the extent of fiscal equity present in the southern states and examined the status of systemic reform, school-finance litigation, and school-finance reform in the region. The paper proposes a new school-finance model that promotes equity and equal education opportunities for all students. The study used 1992 fiscal data from the National Center for Education Statistics "Common Core of Data" (CCD92). The analysis evaluated horizontal equity and equal opportunity using selected expenditure, revenue, and wealth variables available in the database. The analysis revealed great variability in equity within and between the states. Because states would find it extremely difficult to fund systemic reform without a source of additional funding, it is imperative that education reform and school-finance reform be considered simultaneously. Policymakers should, therefore, be cognizant of fiscal disparities within states and between states and take the appropriate actions to ensure that every student has an equal opportunity to learn. To expedite this, they should consider new sources of revenue and nontraditional methods for funding schools. Contains 12 tables and 61 endnotes. (Author/LMI)

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Marilyn A. Hirth

Associate Professor

Department of Educational Studies

Educational Foundations & Administration

Purdue University

1446 LAEB

West Lafayette, IN 47907-1446

317/494-7299

Fax: 317/496-1228

e-mail: mahirth@purdue.edu

National Council of Professors of Educational Administration

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Abstract

Education reform has a national focus and vision. Although Goals 2000 provides supplemental federal funding, there is "stress" on the fiscal ability of states to finance systemic reform. This research analyzes the extent of fiscal equity present in the Southern states and examines the status of systemic reform, school finance litigation, and school finance reform in the region. A proposed new school finance model that promotes equity and equal educational opportunities for all students is proposed.

The National Center for Education Statistics Common Core of Data (CCD92) is the database utilized for the fiscal equity analysis. For the purposes of this study the fiscal data for 1992 is chosen for analysis. Horizontal equity and equal opportunity is evaluated using selected expenditure, revenue, and wealth variables available in the Common Core of Data.

The analysis revealed that there is great variability in equity within and between the states. It would be extremely difficult for the states to fund systemic reform without a source of additional funding. Hence, it is imperative that education reform and school finance reform be considered simultaneously. Therefore, policy makers must be cognizant of fiscal disparities within states and between states and take the appropriate actions to ensure that every student has an equal opportunity to learn. In order for this to happen, new sources of revenue and non-traditional methods of funding schools must be considered.

An Analysis of Fiscal Equity and its Relationship to Systemic Reform, Goals 2000, and School Finance Reform in the Southern States

Education reform has been the subject of national debate since the early 1980's when the National Commission on Excellence in Education published "A Nation at Risk."[1] This report asserted that there was a "rising tide of mediocrity" present in the American educational system and that as a consequence, our nation's global competitiveness was in danger. Although over a decade has passed since its publication, and every state has implemented education reform policies to varying degrees during that time, national attention is still focused on the quality of education. For example, in 1990 the National Governors Association formulated national goals for education, and in 1994, those goals evolved into Goals 2000: Educate America Act. Furthermore, a recent USA Today/CNN/Gallup poll indicates that the quality of public education ranks as the top priority (67 percent of the respondents) in the 1996 presidential campaign.[2] Undoubtedly, the quality of public education is a "hot" political issue and the candidates' positions on the issue will be a deciding factor in many citizens choice for president. The issue is not whether a candidate is for or against education, but rather the level of federal involvement and concomitant funding of federal education programs they endorse.

The means for achieving the desired improvements in the quality of education nationwide also requires the attention of policy makers and researchers. In the 1980's the approaches to reform were fragmented and met with limited success. In contrast, one of the most recent and practical approaches to education reform that has emerged in the 1990's is what has been termed systemic reform. The basic tenets of systemic reform are embodied in Goals 2000 legislation. According to systemic reform researchers there are two major themes associated with the reform movement. The first is that systemic reform requires comprehensive change and focuses on many aspects of the system. The second stresses the idea of policy integration, coordination, or

coherence around a clear set of outcomes.[3] The fact that fragmented policies prevalent in the 1980's have failed suggests that "integration" is the key ingredient to accomplishing real systemic reform. It is also evident to systemic reform experts that fiscal problems at the state level have slowed the pace of systemic reform and that without large amounts of new money, systemic reform will proceed slowly.[4]

The conditions described above suggest a necessity to determine how fiscally capable states are to implement systemic reform and Goals 2000. The amount of fiscal equity present in any particular state has an impact on the ability of their local school districts to meet the challenges of implementing reform and improving the quality of education in their state. It is well known and accepted that there are "rich" and "poor" districts in many states across the nation. Hence, the fiscal capacity of a district often determines their ability to fund or not fund systemic reform and/or Goals 2000 initiatives in their district. In this research the focus is on the geographic region in the South as defined by the National Center for Education Statistics.[5] The South has often been depicted as being poorer than other regions of the country in terms of funding education; therefore, an examination of fiscal equity in this region will, in subsequent research, be compared to the other geographic regions of the country.

Another important factor in successful implementation of systemic reform is the importance of establishing a policy linkage between systemic reform, equity, and school finance reform. Within the framework of systemic reform it is essential that policies leading the efforts be coordinated with school finance reforms that foster equity.[6] An excellent example of the significance of this coordination is found in the state of Kentucky where in 1990, after the court ruled their system of common schools unconstitutional, the Kentucky General Assembly enacted the Kentucky Education Reform Act (KERA). This act is the most comprehensive education reform legislation in this country to date; the Kentucky General Assembly re-created and re-established a new system of common schools.[7] In addition to totally reorganizing education and

setting high academic standards for all students, the act included a new system of financing schools that has brought greater equity across districts. Hence, the policy coordination of systemic reform initiatives in conjunction with school finance reform is evident in Kentucky and serves as a model for other states to emulate.

Consequently, a key policy issue in the national movement to improve the quality of education is the ability of states to fund the type of comprehensive reform necessary to achieve real improvement in their educational programs. The purpose of Goals 2000 funding is to assist states and communities in developing and implementing their own education reforms; hence, the amount of actual grant dollars is minimal (see Table 12) and is only intended to supplement state funding of education reform. Therefore, there must be a concerted effort in each state to simultaneously develop and implement systemic reform and finance the initiatives on an ongoing basis. The success of reforming school finance in combination with education reform is demonstrated in Kentucky; however, no other state has implemented such comprehensive reform legislation. Within the context that has been set forth in the preceding paragraphs, the overall purpose of this paper is to analyze fiscal equity in the Southern states and examine its relationship to systemic reform, Goals 2000, and school finance reform. In order to accomplish this purpose the paper is organized into three major sections. In the first section equity is defined and the results of the statistical analysis of horizontal equity and equal opportunity across the 16 southern states is presented. In the next section the status of systemic reform initiatives, school finance litigation, and school finance reform in this particular region of the nation is discussed in the context of its relationship to fiscal equity statistics. In the last section, several suggestions for school finance models that promote equity and incorporate the principles associated with Goals 2000 and systemic reform are offered as alternatives for policy makers to consider.

Fiscal Equity in the South

For the purposes of this research the geographic region of the South includes Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.[8] Before embarking reporting the statistical results of the fiscal equity analysis of these states it is important to define equity, as well as the horizontal equity and equal opportunity statistics employed in the analysis.

The definition of equity is actually somewhat controversial in the education community. In general terms, equity means distributing and expending available revenues with fairness to schools and to students, regardless of their location within a state.[9] However, it is also important to keep in mind that spending the same amount of money on every student is evidence of equality, but it may not be equitable.[10] For example some students, such as those with disabilities or limited English proficiency, may require greater expenditures to ensure an education that is equitable. Therefore, equity, in actual practice means providing for equal treatment of equals (its horizontal component) and for fair and reasonable but unequal treatment of unequals (its vertical dimension).[11] Hence, the terms horizontal and vertical equity are developed from these definitions; and, their subsequent statistical measurements are used by school finance researchers to measure the amount of horizontal and/or vertical equity in a particular state school finance system. Equity is assessed by measuring the dispersion, or inequality in the distribution of objects; no dispersion indicates perfect equity.[12] A third equity principle is that of equal opportunity. This equity principle requires that there be no relationship between expenditures, resources, programs, outcomes, and per-pupil wealth or fiscal capacity. The measurement of equal opportunity illustrates the implementation of wealth neutrality where the general fiscal or wealth neutrality concept states that education should not be a function of local wealth.[13] One of the most common statistical measurements to measure wealth neutrality is simple

regression. State school finance formulas attempt to address two aspects of equity: equity for students and equity for taxpayers. The focus of this research is upon horizontal equity and equal opportunity for students. Measuring and evaluating a states' fiscal equity indicates how equitable students in the state are treated and determines whether district wealth or fiscal capacity impacts education. The results also give an indication of how capable the state and individual districts are to fund systemic reform initiatives and make efficient use of supplemental Goals 2000 funding. The next section presents the methodology employed to conduct the statistical analysis.

Methodology

The horizontal equity and equal opportunity statistics used to measure school finance equity pioneered by Berne and Stiefel[14] are utilized in this research. The horizontal equity variables in this analysis include current expenditures, core expenditures, and total expenditures on a per pupil basis. The statistics chosen to examine horizontal equity are the range, restricted range, federal range ratio, coefficient of variation, McLoone index, and the gini coefficient. The principle of equal opportunity is evaluated by conducting simple regressions with per pupil revenues and expenditures as the dependent variable and per pupil wealth indicators (i.e., median income all households, and median value of housing) as the independent variables.

The fiscal data for the analysis was provided by the National Center for Education Statistics Common Core of Data (CCD92) for the 1992 fiscal year (1991-92 school year). The fact that there is such a database from which to obtain revenue and expenditure data is tremendous; however, there are several limitations to the data set that should be addressed before interpreting the results of the equity analysis. The revenue and expenditure information in the data set were collected from the 1992 Bureau of the Census School Finance Survey (F-33). The Users Guide for the CCD cautions that intrastate comparability of the data is strong, however caution must be taken when making interstate comparisons.[15] For example, there is great variation in

the content of state aid programs, therefore comparisons across states should be done with caution. The equity statistics are calculated on a state-by-state basis in this research, therefore, the degree of intrastate equity is what is actually being calculated. Cross comparisons of the equity statistics across states is then more robust. The household characteristics (median income all households and median value of housing - all units) data came from the 1990 U.S. Census. The specific definitions of the categories for expenditures and revenues are defined in the results section.

Results

The results of the fiscal equity analysis reported in the tables that follow are based on the type of analysis and variable category. A brief analysis of the results is included in each section.

Horizontal equity

Current expenditures.

Table 1 presents the horizontal equity statistics for current expenditures per pupil. The data set defines current expenditures as including: expenditures for the categories of instruction, support services, and non-instructional services for salaries, employee benefits, purchased services and supplies, and payments by the state made for or on behalf of school systems.[16] Debt service and capital outlay funds are not included in this expenditure category.

Insert Table 1 about here

Examination of Table 1 reveals that Texas has the highest range statistic ($37,935) of the 16 southern states. Such an extreme difference requires further investigation. It is important to remember however, that the range indicates the difference between the highest and lowest per pupil expenditures; therefore outliers in the distribution are not eliminated. In Texas, however the five highest spending districts spend $40,505, $18,579, $15,626, $15,336, and $13,606 per pupil

respectively compared to the lowest spending districts where per pupil expenditures are $2,570, $2,907, $2,980, $3,006, and $3,053. The smallest difference between the highest and lowest spending district is found in Delaware where there is a difference of $1,094 per pupil.

The restricted range eliminates the upper and lower 5% of pupils in the distribution, which theoretically gives a more accurate indication of the range of expenditures across districts; however, it still only considers two observations. Even with the outliers removed Texas still demonstrates the highest range statistic ($4,211) which although much less than the range statistic it is still the greatest in the South. The lowest restricted range is found in West Virginia ($849).

The federal range ratio is defined as the restricted range divided by the per pupil object at the 5th percentile.[17] The results of this calculation indicates how much larger the observation at the 95th percentile is when compared to the observation at the 5th percentile. An advantage of the federal range ratio statistic is that since it is a ratio it does not change with inflation. In this analysis of current expenditures, Texas has the highest federal range ratio, 1.207 which, in percentage terms, means that the value at the 95th percentile is 120.7% larger than the value at the 5th percentile. Oklahoma with a federal range ratio of 1.003 is also considered high. The smallest federal range ratio is found in West Virginia (.1945).

The coefficient of variation is the standard deviation divided by the mean with its value ranging from 0 to 1. It indicates the percent variation about the mean. It roughly indicates the percentage above and below the mean within which two-thirds of the observations lie.[18] The smaller the coefficient of variation the greater the equity in the distribution; hence a value of 0 indicates that the object is distributed uniformly among all students. Although determining a standard for the coefficient of variation is a value judgment, a value of .10 (10 percent) or less is generally accepted as an absolute standard.[19] The highest value of .2853 is found in Louisiana while the lowest

value of .0525 is found in West Virginia. The next highest values are found in Virginia (.2033) and Georgia (.1727) and Tennessee (.1613). Alabama, Arkansas, Kentucky, Maryland, Mississippi, Oklahoma, South Carolina and Texas are all above the .10 recommended standard for the coefficient of variation. On the other hand, Delaware, Florida, North Carolina and West Virginia are all below the .10 value.

The McLoone index is defined as the ratio of the total dollar inputs for students below the median to the dollar inputs that would be required if all students below the median were receiving the per-pupil dollar amount at the median.[20] The McLoone index varies between zero and one and gets larger as equity increases, hence a value of 1 is ideal. Although a standard has not been set, a value greater than .9 is desirable.[21] Every state in the South except Oklahoma (.8808) has a McLoone index greater than .9. This is commendable, since this means that these states are making a concerted effort to equalize expenditures in districts below the median.

The gini coefficient shows how far the distribution of per pupil objects is from providing each percentage of students (e.g. 5 percent of pupils) with an equal percentage of object (e.g. 5 percent of objects); based on the Lorenz curve.[22] In this research the per pupil object is expenditures. Again, although a standard has not been set for the gini coefficient, a value below .1 is considered desirable.[23] Based on this standard only Louisiana (.1263) and Virginia (.1064) have gini coefficients above .1. All of the other Southern states have gini coefficients ranging from .0281 to .0900.

Core expenditures.

Table 2 presents the horizontal equity statistics for core expenditures per pupil. The data set defines core expenditures as including: only current expenditures for instruction, student support services (health, attendance, guidance, and speech) and instructional staff support services (curricular development in staff training, and educational median, including libraries).[24] Analysis of core expenditures should give an accurate indication of the central purpose of school districts; educating students.

Insert Table 2 about here

Table 2 shows that the largest range for core expenditures is evident in Texas ($24,616). The smallest range of core expenditures is found in Delaware ($941). These are the same two states that had the highest and lowest current expenditures as illustrated in Table 1. Hence, elimination of expenditures for non-instructional services for salaries, employee benefits, purchased services and supplies did not make a difference in the overall ranking of highest and lowest range of current and core expenditures per pupil. Oklahoma has the next highest range of core expenditures ($6,913) with the next closest being Tennessee ($4,056). Again, one must keep in mind that extremes in the distribution are included in the range statistic, therefore it is not the most accurate representation of the variations in resources among districts.

The largest value for the restricted range is found in Texas ($2,584) and the lowest value in West Virginia ($669). The other states range from $1,968 in Oklahoma to $703 in Mississippi. The restricted range statistics should be noted in West Virginia and Mississippi, however it is important to realize that although the spread between high and low spending districts is small, the expenditures per pupil are low when compared to other states. For example, the mean expenditure in Mississippi is $2,162 compared to a high of $4,681 in Maryland. Hence, the horizontal equity statistics are desirable but the overall level of funding is likely inadequate.

The largest federal range ratio for core expenditures in Table 2 is found in Texas (1.020) followed by Tennessee (.9429) and Oklahoma (.8560). The smallest federal range ratio is in West Virginia (.2057). Comparatively, in Texas the district at the 95th percentile is spending 102% more per pupil than the district at the 5th percentile. In contrast, students in West Virginia at the 95th percentile district are only having 21% more spent on them than the students at the 5th percentile district. The policy question that must be addressed is whether a 102% or even a 21% difference in

expenditures between the highest and lowest spending districts is fair and equitable. This type of variability is also a concern in school finance lawsuits that examine adequacy and demand equal expenditures per pupil.

The most desirable value for the coefficient of variation (.10 or 10% or less) is found in West Virginia (.0538) and Delaware (.0687). All of the other Southern states are above the desired value with values ranging from .1022 (Florida) to .1907 (Virginia).

The highest and most desirable McLoone index for core expenditures is found in West Virginia (.9728). However, all of the Southern states have McLoone indexes above the .9 desired level. Again, this was the same finding for current expenditures. West Virginia's McLoone index is outstanding, however none of the districts would be considered "rich." This is illustrated by looking at the extremes in the distribution; the highest spending district spends $4,565 per pupil while the lowest spending district spends $3,167 per pupil.

The gini coefficients for all of the Southern states are also below the .1 recommended level. This is outstanding. The highest value of .0990 is found in Virginia while the lowest is in West Virginia (.0291).

Total expenditures.

Table 3 presents the horizontal equity statistics for total expenditures per pupil. The data set defines total expenditures as decreases in net financial resources for the purposes of public education. These consist of current, property, and facilities acquisitions expenditures, and other current expenditures not directly related to pre-K through 12 programs. These "other current expenditures" are reported as community services and direct cost expenditures.[25] Considering all that is included in this category it is important to exercise caution when interpreting the results across districts.

Insert Table 3 about here

Table 3 indicates that Texas has the highest range statistic for total expenditures ($41,501). Oklahoma ranks second with a difference of $11,652 between the highest and lowest spending district. The smallest range of total expenditures is found in Delaware ($1,808). This ranking is consistent with those found for current expenditures (Table 1) and core expenditures (Table 2). Even though other expenditures have been added to the mix such as capital outlay and debt service their overall ranking remains the same. The range represents two observations that are extremes in a distribution; however, it can be argued that although these districts may be outliers they do exist and therefore represent the extent of permissible differences in expenditures in the given state.

The highest value for the restricted range is found in Texas ($4,637) followed by Oklahoma ($3,698) and Virginia ($3,238). The smallest restricted range is found in Kentucky ($1,233). Although the restricted ranges for most of the Southern states appear "reasonable," school finance researchers believe that it is not a good indicator of the equality of the distribution of the object for the entire education system.[26]

The largest federal range ratio for total expenditures in Table 3 is found in Texas (1.205) followed by Oklahoma (1.077) and Tennessee (.9567). The smallest federal range ratio is found in Kentucky (.3735). Since this was only two years into Kentucky's education and finance reform it is likely that this statistic has improved since 1992.

Delaware has the most desirable coefficient of variation (.0666) followed by West Virginia (.0961). All of the other Southern states are above the .1 or 10% standard considered acceptable among school finance researchers. The highest coefficient of variation is found in Louisiana (.2755).

The McLoone indexes for total expenditures (Table 3) are generally lower overall than for current and core expenditures, but considering all of the additional categories included in total expenditures it is not an unexpected finding. Two states are

below the .9 desired standard; Oklahoma (.8853) and Texas (.8927). All of the others are in the lower range of .9 with the highest value found in Maryland (.9416).

The gini coefficients for total expenditures (Table 3) indicate that Louisiana has the highest value (.1264) followed by Virginia (.1101) and Tennessee (.1021). These three states are above the desired standard of .1 or 10%. All of the other Southern states have values below .1, ranging form a low of .0352 in Delaware to a high of .0940 in Georgia.

Equal Opportunity

The principle of equal opportunity utilized in this analysis is based on the definition and statistical procedures established by Berne and Stiefel.[27] They postulate that the principle of equal opportunity requires that there be no relationship between expenditures, resources, programs, outcomes, and per-pupil wealth or fiscal capacity.[28] This principle illustrates the concept of wealth neutrality which states that education should not be a function of local wealth. Therefore, the question posed in this research is whether the variables associated with wealth in a community (median value of housing and median income) are related to the amount of resources (expenditures and revenues) available for education. In order to accomplish this purpose, simple correlation and regressions are used to assess school finance equity by estimating relationships that may vary by association. In this analysis the independent wealth variables used are median value of housing and median income of all households. These are the only two variables associated with district wealth that are available in the Common Core of Data (CCD92). The dependent variables used are current and core expenditures and state and local revenue on a per pupil basis. The correlation coefficients in this analysis are categorized based on standards established by Guilford & Fructer;[29] 0 to .2 (slight or negligible), .2 to .4 (small or weak), .4 to .7 (substantial or moderate), .7 to .9 (high or strong), and .9 and above (highly correlated - highly

dependable relationship). The results of the regressions are categorized by variables and reported in Tables 4-11.

Current expenditures per pupil and median value of housing.

Table 4 reports the regression statistics for the relationship between the median value of housing as the independent variable and current expenditures per pupil as the dependent variable.

Insert Table 4 about here

Across the South the most significant correlation coefficients are found in Maryland (.8370) and Virginia (.8013) which indicates a strong relationship between median value of housing and current expenditures. When interpreting the meaning of the correlation coefficient it must be made clear that correlation only indicates the strength of a relationship and does not necessarily imply causality.[30] One of the best ways to interpret the correlation coefficient is to examine the regression coefficient, better known as the square of the coefficient, coefficient of determination, or r^2. The square of the coefficient (r^2) can be interpreted as the proportion of the variance in one of the variables that can be explained by variation in the other variable.[31] In Maryland an r^2 of .7066 indicates that 70.66% of the variation in current expenditures can be accounted for by variation in the median value of housing. Likewise, in Virginia, 64.21% of the variation in current expenditures can be accounted for by variation in the median value of housing. The slope assesses the magnitude of the relationship. Berne and Stiefel[32] state that the slope shows the size of the change in the dependent variable (per pupil object) associated with a one-unit change in the independent variable (per pupil wealth variables). When evaluating equal opportunity a slope of 0 is equated with equity. The t statistic tests the individual null hypothesis that each coefficient is zero. These quantities are simply the parameter estimates divided by their standard errors.[33] Since this is a one variable model, the p values are the same as those for the

F test of the model. Only four states in the South have t-statistics that are not significant; Kentucky, Mississippi, South Carolina, and West Virginia.[34] In all of the other states the t-statistic is significant and the null hypothesis is rejected. Finally, the F-ratio is the ratio of the model mean square divided by the error mean square.[35] The larger this ratio the better the fit of the regression line. Hence, if this value is large and significant (p=.05 or less) the model is doing a good job of describing the relationship between the variables. Therefore, the F-ratio in Maryland (51.49**) indicates that the regression model is accurately describing the relationship between median value of housing and current expenditures per pupil. Virginia has a very high F-ratio (234.99**) as well as Oklahoma (136.51**). Oklahoma and several other states have negative slopes which indicates an inverse relationship between the median value of housing and ~~core~~ current expenditures per pupil.

In summary, the equal opportunity results for the Southern states indicate that the correlation between median value of housing and current expenditures per pupil is slight or negligible in Arkansas, Kentucky, Mississippi, South Carolina, Tennessee, Texas, and West Virginia. A small or weak relationship is found in Alabama and North Carolina. A more substantial or moderate relationship between the variables is found in Delaware, Florida, Georgia, Louisiana, and Oklahoma. A high or strong relationship between median value of housing and current expenditures per pupil is evident in Maryland and Virginia. Except for Kentucky, Mississippi, South Carolina, and West Virginia the t-statistics and F-ratio's are all significant. This means that in all of the other Southern states the coefficients are not zero and the regression model is accurately describing the relationship between the variables.

Core expenditures per pupil and median value of housing.

Table 5 reports the regression statistics for the relationship between median value of housing as the independent variable and core expenditures per pupil as the dependent variable.

Insert Table 5 about here

In this analysis Maryland and Virginia are again found to have correlation coefficients that are classified as high or strong. Maryland has an r=.8241 and an r^2=.6792. Likewise Virginia has an r=.8089 and an r^2=.6543. Therefore, these two states not only have a high correlation between the variables, but a large portion of the variability in core expenditures is accounted for by variation in the median value of housing. Substantial or moderate (.4 to .7) relationships are indicated in Delaware, Florida, Georgia, Louisiana, and Oklahoma. Small or weak (.2 to .4) relationships are found in Arkansas and North Carolina. Slight or negligible relationship (0 to .2) are evident in Kentucky, Mississippi, South Carolina, Tennessee, Texas, and West Virginia. Kentucky, Mississippi, South Carolina, and West Virginia are the only states where the t-statistics and F-ratios are not significant. There are again, negative slopes in several states[36] indicating an inverse relationship between median value of housing and core expenditures per pupil.

The fact that half of the Southern states have a small or slight relationship between median value of housing and core expenditures per pupils is a positive finding. This means that based on the measurement of these variables their funding formulas promote fiscal neutrality; or, that education is not a function of local wealth in these states. One might question however if the median value of housing in a community is an appropriate or adequate measure of local wealth. If assessed value of property in the district were a variable that was available on the CCD92 a comparison of these statistics would prove interesting. The next two sections and tables explore the relationship between median income of all households and current and core expenditures per pupil.

Current expenditures per pupil and median income all households.

Overall the results of the regression analysis of median income all households as the independent variable and current expenditures per pupil as the dependent variable found in Table 6 indicate that Maryland (.7363) and Virginia (.6016) are again the two states with strong correlation coefficients. Delaware (.5687) and Oklahoma (.4585) rank in the substantial or moderate category with the t-statistics and F-ratio's indicating significance at the .05 and .01 levels respectively. All of the other correlation coefficients in the Southern states rate in the slight or negligible category.

Insert Table 6 about here

Core expenditures per pupil and median income all households.

Table 7 shows the results of the regression analysis for median income all households as the dependent variable and core expenditures per pupil as the dependent variable.

Insert Table 7 about here

In this regression analysis Maryland (.6974) and Virginia (.6076) emerge as states with the highest correlation coefficients; however they are now classified in the substantial or moderate range instead of the high or strong category as was previously the case (see Tables 4, 5, and 6) in the other regression analyses. Oklahoma (.5062) and Delaware (.5121) are also in the substantial or moderate classification. In all cases their t-statistics and F-ratio's are significant. The other Southern states have correlation coefficients that are in the slight or weak category. Hence, median income apparently is not a wealth factor that is influential in determining core expenditures per pupil in these states.

Local revenue per pupil and median value of housing.

This part of the regression analysis examines local revenue as the dependent variable and median value of housing as the independent variable. This is perhaps a more accurate indication of the impact of wealth on the amount of local revenue available for education. It must be kept in mind that the amount the state contributes to total revenue for a district is not included in this analysis.

Insert Table 8 about here

In this analysis Maryland has the strongest correlation (.9074) indicating that the amount of local revenue per pupil is highly correlated with the median value of housing in the community. The r^2 for Maryland is .8232 indicating that 82.32% of the variation in local revenue can be accounted for by variation in the median value of housing. Virginia has a high/strong correlation (.8766) and large r^2 (.7684). As Table 8 reveals Delaware, Florida, Kentucky, and North Carolina, also have correlation coefficients in the high/strong category (.7 to .9). Alabama, Arkansas, Georgia, Louisiana, South Carolina, Tennessee, Texas, and West Virginia are ranked in the substantial/moderate category (.4 to .7). Mississippi is in the small/weak classification (.2 to .4) while Oklahoma has a correlation coefficient in the slight/negligible category (0 to .2). All of the t-statistics and F-ratios are significant at the .01 level for all of the Southern states; hence, it appears that the regressions are accurately depicting the relationship between the variables.

Local revenue per pupil and median income all households.

The regression statistics for examining the relationship between median income all households as the independent variable and local revenue per pupil as the dependent variable are reported in Table 9.

Insert Table 9 about here

This analysis reveals similar results as the previous one using median value of housing as the independent variable (see Table 8). Maryland and Virginia are again the states with the highest correlations and coefficients of determination (r^2). Overall, the correlations are somewhat lower than those found in Table 7, however they are in the same general range for each of the states. All of the t-statistics and F-ratio's are significant at the .01 level. In addition, all of the slopes are positive which indicates that as median income increases the amount of local revenue per pupil increases.

State revenue per pupil and median value of housing.

The regression results evaluating the relationship between median income of all households as the independent variable and state revenue per pupil as the dependent variable are depicted in Table 10.

Insert Table 10 about here

In this analysis Virginia has the strongest correlation coefficient (.8731) and an $r^2 = .7623$ followed by Kentucky with a correlation coefficient of .8231 and an $r^2 = .6775$. Maryland and South Carolina also have coefficients ranked in the high/strong category. This means that this particular indicator of local wealth (median value of housing) has a strong relationship with the amount of revenue the state provides. The fact that the slopes are negative in all of the states means that as the median income increases in a community the amount of state revenue decreases. The results in Table 10 indicate that all of the states consider wealth, as measured by median value of housing in this case, when allocating state revenue to local school districts. The more wealthy the district, the less state revenue they receive. In some states there is a stronger relationship than in others; however, the slopes are all negative and the t-statistics and F-ratio's are significant in every state except Alabama and Delaware.

State revenue per pupil and median income all households.

The last regression analysis in this research examines the relationship between median income all households as the independent variable and state revenue per pupil as the dependent variable. The results are summarized in Table 11.

Insert Table 11 about here

This analysis reveals similar results to those found in Table 10. Kentucky demonstrates the strongest correlation coefficient (.8294) followed by Virginia (.7994). Maryland also has a high/strong correlation coefficient (.7422). The majority of states are ranked in the substantial/moderate category (.4 to .7). The correlations are slight/negligible (0 to .2) in Alabama, Arkansas, and Louisiana, and small/weak (.2 to .4) in Delaware and Mississippi. All of the slopes are negative indicating that as median income increases the amount of state revenue per pupil decreases. The t-statistics and F-ratios are significant in every state except Alabama, Delaware, and Louisiana. Overall, these findings suggest that states are attempting to equalize funding across school districts since they consider local wealth when allocating state dollars to school districts. In all of these cases, the greater the wealth of the community the less assistance they receive from the state.

Summary of Results

The results of the fiscal equity analysis reported in Tables 1-11 indicate that the Southern states vary in their ability to fund education and provide equity and equal educational opportunity through their school finance formulas. The horizontal equity analysis reveals that Texas and Oklahoma have the greatest differences in current expenditures, core expenditures, and total expenditures as measured by the range, restricted range, and federal range ratio. On the other hand, Delaware has the smallest range of current, core, and total expenditures. West Virginia has the lowest restricted range, and federal range ratio for current expenditures, and the smallest federal range

ratio for core expenditures. Kentucky has the smallest restricted range and federal range ratio for total expenditures. Mississippi has the smallest restricted range for core expenditures. These states appear consistently in the same high and low categories throughout the analysis.

The best values for the coefficient of variation (below .10) were found in Delaware and West Virginia for all three categories of expenditures. McLoone indexes were in general very good; only Oklahoma had a value below the desired .9 value for current expenditures and total expenditures. Texas was below .9 for total expenditures. The results for the gini coefficient were also quite good across the South. Only Louisiana and Virginia were above the .1 recommended level for current expenditures, as well as for total expenditures with the addition of Tennessee. For core expenditures ALL of the Southern states were below the .1 recommended value.

The assessment of equal educational opportunity in terms of wealth neutrality reveals that Maryland and Virginia demonstrate the strongest relationships between wealth and expenditures per pupil. The results of the regression analysis for local and state revenue per pupil as the dependent variable and the selected wealth variables indicate that all of the Southern states attempt to equalize revenues based on local wealth. However, Maryland and Virginia emerge again as the two states with the strongest relationship between wealth and local revenue. When examining the relationship between the two wealth variables and state revenue Virginia and Kentucky have the strongest correlations. In all of the states the slopes are negative for state revenue (see Tables 10 & 11); hence, the more wealthy the district the less state revenue and vice versa. On the other hand, when the slopes are positive (see Tables 8 & 9) it means that the greater the wealth of the local school district, the more local revenue they can generate and the stronger the relationship between the wealth and revenue variables.

The status of horizontal equity and equal opportunity across the South is varied ranging from poor to very good; therefore, it is clear that fiscal equity is definitely a goal that has not yet been achieved. In the next section an overview of systemic reform, school finance litigation, and school finance reform in the South is presented and discussed in the context of the fiscal equity results reported in the previous section.

Systemic Reform, School Finance Litigation, & School Finance Reform in the South

It is difficult to locate specific information concerning each state's systemic reform initiatives; however, it is likely that reforms are not specifically labeled "systemic" and therefore cannot be easily located in library, ERIC, or Web searches. However, it is safe to say that each of the states is implementing systemic reform, at least in terms of setting standards. The best source of information concerning the standards movement was a special report section in Education Week.[37] Since the setting of content standards is a key ingredient of Goals 2000 this information is useful in determining each states movement toward systemic reform. This special report indicated that each of the 16 Southern states has implemented "standards" in the content areas. Hence, each of the states has started to implement systemic reform by virtue of the fact that they have established content standards. In addition, the fact that every Southern state except Virginia has developed state improvement plans to qualify for and receive funding through Goals 2000 implies that they have education reform plans that are systemic in nature. Goals 2000 allocations for FY 1994, FY 1995, and 1996 estimates are reported in Table 12.

Insert Table 12 about here

The asterisks next to allocation in FY 1995 indicate that those states have not applied for second year funding. In April 1996, changes in Goals 2000 now allow direct grants to local education agencies in nonparticipating states. In these states, with the approval of their state education agency, local school districts may apply for a

portion of their state's Goals 2000 allotment.[38] This year five states - Alabama, Oklahoma, Virginia, Montana, and New Hampshire - have indicated that they are not going to apply for Goals 2000 funding.[39] The major reason these states give for not applying for Goals 2000 funding is that they believe it gives the federal government too much control over their education system.

Another important amendment to Goals 2000 is that references to opportunity-to-learn standards or strategies has been eliminated. In addition, provisions in the original bill that authorized the creation of the National Education Standards Improvement Council (NESIC) were repealed. The amendments also made it clear that there are no mandates for outcomes-based education, school-based health clinics, or social services required as a condition of receiving Goals 2000 funding.[40] Another important change is illustrated in Table 12; the 1996 estimates for funding are less than the allocation for FY 1995. This is an indication that federal funding is being cut for Goals 2000 and is a sign that such a trend is likely to continue. Therefore, states will be on their own, to an even greater extent, to implement systemic reform in their respective states.

It was reported earlier that Alabama, Oklahoma, and Virginia were three of the five states that decided not to apply for Goals 2000 funding. Based on the previous analysis of fiscal equity in these states it is interesting to point out that the equal opportunity statistics for Virginia showed a consistently high relationship between wealth variables and expenditures and revenues. Virginia's horizontal equity statistics were not outstanding. For example, as indicated in Table 3, the range of total expenditures was $6,950, restricted range, $3,238, federal range ratio, .7861, coefficient of variation .2083, McLoone index, .9342, and gini coefficient, .1101. In all cases except the McLoone index, the horizontal equity statistics would be considered only fair, if not poor. Similar statistics are evident in Tables 1 and 2. Consequently, here is a state with fiscal equity problems, yet they choose to reject over 6 million

dollars (see Table 12) in federal funding that, if applied for, could assist some of the most needy districts with implementing educational reform. Oklahoma is in even worse shape for horizontal equity statistics (see Tables 1, 2, and 3), yet they are also rejecting over 4 million dollars (see Table 12) in funds for Goals 2000. Alabama is a poor state, although the horizontal equity statistics are better than those for Virginia and Oklahoma (see Tables 1, 2 and 3). Their 1996 estimate for Goals 2000 funding is over 5.5 million dollars (see Table 12). This seems like a lot of money to reject, considering that Alabama has recently lost a school finance lawsuit in trial court.[41] The lower court held that since the richest and poorest districts were part of the system, the extreme differences between them were a sufficient basis to declare the system unconstitutional.[42] At present, the litigation is on hold with an agreement between the plaintiffs and defendants. The legislature is required to adopt a plan that will eliminate the perceived inequities and inadequacies between districts.[43] Under these circumstances, additional funding from Goals 2000 would appear to be advantageous. Another state that rejected Goals 2000 funding, is Oklahoma where there was a school finance lawsuit filed in Oklahoma in 1990, but the litigation has remained dormant since 1991.[44] In Virginia there is no evidence of an active or dormant lawsuit.

School finance litigation in the South has been active. Florida, Delaware, Mississippi, Georgia, and Virginia were the only states where no evidence of a recent or pending lawsuit was found. As of August 1995 (the most recent information available) litigation was pending in Alabama, Arkansas, Louisiana, West Virginia, Maryland, North Carolina, and South Carolina.[45] Kentucky is well known for its school finance lawsuit, Rose v. Council for Better Education,[46] where its entire system of common schools was ruled unconstitutional and the General Assembly was ordered to totally revamp education in the state. Tennessee has also had an active school finance case since 1988. After several rulings and reversals, the Tennessee Supreme Court declared the state funding system unconstitutional.[47] Consequently, Tennessee

has enacted a comprehensive reform act which includes transition to a new school finance funding formula.[48] Texas is a state with a long history of school finance litigation. School funding was revised drastically in 1984, but in 1987 Edgewood ISD v. Kirby the district court held for the plaintiff and the decision was upheld by the Texas supreme court in 1989.[49] After several Senate Bills to address the court mandate, in 1991 and 1992 the bills were declared unconstitutional by the Texas supreme court. Another Senate Bill was passed in 1993 and its constitutionality is under consideration again.[50] Undoubtedly, Texas has a wealth of school finance problems, further illustrated by the findings of this research in Tables 1-3, where it had the worst horizontal equity statistics of all the 16 Southern states.

Undoubtedly, there is an abundance of school finance litigation cases in the Southern states, many of which are still pending or active. In most cases, litigation was initiated by school districts at the lower end of the distribution of resources who felt the inequities were unfair and unconstitutional. Hence, the implementation of systemic reform policies that are linked to school finance reform is essential for continued progress toward providing a quality education for all students. In the final section, ideas for new school finance models that promote equity and equal opportunity in the context of systemic reform are presented and discussed.

New School Finance Strategies, Systemic Reform, and Goals 2000

It is evident that changes are needed in state school finance structures if significant changes in educational productivity demanded by systemic reform and Goals 2000 are going to occur. The results of the research presented in this paper demonstrate that there are drastic differences in expenditures per pupil between districts within states and across states in the South. Local wealth is also a significant determinant of the amount of expenditures and revenue available for education in many states. Hence, all students are not afforded equal opportunities to receive a quality education in the South. It has also been found by other researchers that even recent

school finance reforms in Kentucky, New Jersey, and Texas have made only modest improvements in fiscal equity.[51] Likewise, an analysis of school financing inequities among the states concluded that substantial variation exists in the distribution of education revenues within states. When viewed from a national perspective the differences in revenues were even greater than those found within most states. It was also discovered that states devote proportionally different amounts of their available funds to education, and varied in their capacities to absorb increased public spending.[52] The conclusion has thus been drawn that existing school finance strategies have been inadequate in the past, and therefore, appear to be even less adequate for the future.[53] There is also pressure from the courts requiring states to reduce, if not eliminate, fiscal disparities caused by unequal distribution of the local property tax.[54] In addition to pressuring states to eliminate fiscal disparities courts are requiring states to establish minimum proficiency levels on thinking and problem solving tasks for all students.[55] Hence, there is a shift in emphasis to outcomes and standards rather than inputs. Therefore, the issue is how to restructure the finance system in a way that focuses on results and outcomes instead of inputs.[56]

Several coordinated strategies for reinventing school finance are offered by Odden & Clune.[57] First, it is suggested that courts and legislatures set fiscal policy targets for state aid programs. Second, they suggest that two tiers of state aid should be used to reach fiscal equity targets. A foundation plan that guarantees equal spending around the 90th percentile of rural spending and above that, a guaranteed tax base keyed to the 90th percentile of statewide wealth per pupil, which can be used to support spending up to the 90th percentile of statewide spending. There should also be an additional amount (i.e., $2,000) to provide additional services for each poor child attending a high poverty school in order to achieve high standards. They further suggest three additional adjustments: (1) a set-aside of 2-4% of the total budget to develop teacher's capacity to teach high-standards curriculum; (2) a set-aside to reward

exceptional performance at the school level; and (3) a small set-aside to develop and administer a statewide student assessment (achievement test) to be used to measure student and school progress. The final component of the proposed new school finance structure is to decentralize school finance. States would require districts to transfer up to 85% of the budget directly to schools and allow maximum budget flexibility. Ideally, direct funding of schools by the state, and a restructuring of districts, or other regional authority should be considered.[58] Furthermore, Goals 2000 amendments now permit school districts to apply for funding in nonparticipating states. Even greater flexibility would be created if individual schools could apply for Goals 2000 grants.

These proposed strategies to reinvent school finance are dramatic; however, drastic changes are necessary if real improvements in the quality of education and student productivity are going to happen. The goals set forth in Goals 2000 will not be reached unless states take on the challenge and reform their school finance structures to meet the new challenges. Although it has been suggested that the federal government take on a more active role in financing education and supporting a core education program,[59] politics plays too strong a role in determining the amount of federal involvement in education. The amount of federal involvement and funding of education is determined by the dominant party in Congress; therefore, increased federal involvement in funding education and mandating reform should be approached with caution. In a manner of speaking, it (the funding) could be here one moment and gone the next. The new school finance structure proposed by Odden & Clune[60] has the potential of resolving many of the fiscal equity and district level disparities across states; however, additional funding will be required at the federal, state, and local levels to make this school finance strategy a viable reality.

Conclusion

The purpose of this research was threefold: to assess fiscal equity in the South; give an overview of systemic reform, school finance litigation, and school finance

reform in the region; and, offer some alternative school finance strategies to meet the challenges and demands to improve the quality of education and increase student productivity. The fiscal equity analysis revealed that the school finance formulas in the Southern states vary in terms of horizontal equity and fiscal neutrality (see Tables 1-11). For example, Texas and Oklahoma have some of the poorest horizontal equity statistics, while Delaware and West Virginia rate much better. Maryland and Virginia rate the poorest for equal opportunity in terms of wealth neutrality. The consequence of this finding is that some states and local school districts in the South are less fiscally capable of implementing new reforms than others.

In the area of educational reform, all of the Southern states have adopted some of the operational components or definitions of systemic reform and Goals 2000 in the development of state standards. Alabama, Oklahoma, and Virginia have decided not to participate in Goals 2000 funding, although with the approval of the state education agency, local school districts in those states may apply directly for a portion of the allocated funds. School finance litigation is prevalent in the South with many cases still active and others just recently decided at varying levels in the courts.

Finally, a new school finance strategy was proposed that would focus on results and outcomes rather than inputs. This strategy coordinates with all of the basic tenets of systemic reform and Goals 2000 that seek to integrate and coordinate policies around a clear set of outcomes. This new funding strategy would require a great amount of additional money, especially at the state level; therefore, it is essential that policy makers be cognizant of fiscal disparities within states and between states and take the appropriate actions to ensure that every student has an equal opportunity to learn.

Education is in a state of transition and turmoil. Ever since the publication of "A Nation at Risk"[61] educators and policy makers have been attempting to remedy the nation's education problems. After over a decade of reforms it is obvious that there are no easy "fixes." Instead, a systemic approach that is comprehensive and attempts to

evaluate and change all aspects of the system is superior to the fragmented approaches of the last decade. Goals 2000 enhances and supports systemic reform initiatives, but it cannot be expected to be the only source of funds to enact reform. Instead, state level policy makers must make a commitment to re-evaluate existing school finance structures and school governance policies if fiscal equity and increased student learning and productivity are going to become realities in the future.

Table 1

Horizontal Equity Statistics for Current Expenditures per pupil

	Statistic							
State	Mean	Median	Range	RRange	FRR	CV	McL	Gini
AL	3,346	3,259	3,136	1,227	.4382	.1182	.9336	.0631
AR	3,781	3,732	4,809	1,651	.5102	.1415	.9224	.0714
DE	5,559	5,351	1,094	1,094	.2227	.0603	.9520	.0333
FL	4,688	4,550	2,075	1,235	.3045	.0839	.9457	.0476
GA	4,143	3,802	3,998	1,636	.5129	.1727	.9190	.0900
KY	3,670	3,551	2,772	1,248	.4074	.1160	.9302	.0655
LA	4,435	3,906	4,927	1,950	.5680	.2853	.9275	.1263
MD	5,822	5,375	2,488	1,554	.3141	.1302	.9581	.0682
MS	3,083	3,015	2,605	1,066	.4091	.1146	.9311	.0630
NC	4,193	4,189	2,084	1,261	.3343	.0891	.9402	.0486
OK	3,793	4,017	10,036	3,273	1.003	.1509	.8808	.0719
SC	4,008	4,033	3,794	1,701	.4874	.1074	.9296	.0554
TN	3,367	3,014	3,299	1,600	.6382	.1613	.9304	.0900
TX	4,180	4,451	37,935	4,211	1.207	.1377	.8945	.0658
VA	4,812	4,332	5,003	2,540	.6745	.2033	.9251	.1064
WV	4,727	4,742	2,031	849	.1945	.0525	.9634	.0281

RRange = Restricted Range
FRR = Federal Range Ratio
CV = Coefficient of Variation
McL = McLoone index
Gini = Gini Coefficient

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Table 2

Horizontal Equity Statistics for Core Expenditures per pupil

	Statistic							
State	Mean	Median	Range	RRange	FRR	CV	McL	Gini
AL	2,608	2,561	1,990	857	.3862	.1088	.9349	.0586
AR	3,009	2,944	2,960	1,087	.4173	.1252	.9331	.0648
DE	3,877	3,636	971	971	.2981	.0687	.9527	.0379
FL	3,167	2,982	1,312	872	.3238	.1022	.9461	.0583
GA	2,915	2,627	2,616	1,114	.4929	.1669	.9271	.0895
KY	2,588	2,500	1,865	906	.4214	.1153	.9383	.0642
LA	2,846	2,620	1,943	1,349	.6093	.1601	.9214	.0878
MD	4,681	4,323	2,198	1,244	.3100	.1467	.9638	.0731
MS	2,162	2,104	1,758	703	.3769	.1070	.9422	.0590
NC	2,981	2,955	1,612	812	.3006	.0865	.9470	.0458
OK	2,693	2,772	6,913	1,968	.8560	.1304	.9063	.0631
SC	2,824	2,829	2,888	1,155	.4734	.1081	.9373	.0546
TN	2,509	2,231	4,056	1,735	.9429	.1748	.9168	.0950
TX	3,078	3,187	24,616	2,584	1.020	.1265	.9084	.0629
VA	3,405	3,035	3,313	1,728	.6496	.1907	.9450	.0990
WV	3,535	3,500	1,398	669	.2057	.0538	.9728	.0291

RRange = Restricted Range
FRR = Federal Range Ratio
CV = Coefficient of Variation
McL = McLoone index
Gini = Gini Coefficient

Table 3

Horizontal Equity Statistics for Total Expenditures per pupil

	Statistic							
State	Mean	Median	Range	RRange	FRR	CV	McL	Gini
AL	3,616	3,504	9,483	1,719	.5905	.1779	.9196	.0822
AR	4,148	4,040	4,616	1,927	.5594	.1539	.9187	.0796
DE	5,970	6,087	1,808	1,808	.3494	.0666	.9213	.0352
FL	5,728	5,394	5,524	2,668	.5769	.1270	.9167	.0715
GA	4,601	4,185	5,053	2,348	.6592	.1739	.9280	.0940
KY	3,898	3,785	2,800	1,233	.3735	.1105	.9306	.0624
LA	4,639	4,122	4,858	2,769	.7880	.2755	.9136	.1264
MD	6,335	6,041	2,967	2,450	.4890	.1432	.9416	.0762
MS	3,359	3,190	3,451	1,497	.5438	.1681	.9262	.0860
NC	4,926	4,840	5,793	3,012	.7422	.1628	.9002	.0865
OK	4,085	4,315	11,652	3,698	1.077	.1606	.8853	.0760
SC	4,503	4,440	4,208	1,863	.4885	.1222	.9311	.0644
TN	3,674	3,222	3,720	2,476	.9567	.1822	.9116	.1021
TX	4,732	4,960	41,501	4,637	1.205	.1564	.8927	.0746
VA	5,454	4,838	6,950	3,238	.7861	.2083	.9342	.1101
WV	5,290	5,376	3,558	2,192	.4732	.0961	.9219	.0515

RRange = Restricted Range
FRR = Federal Range Ratio
CV = Coefficient of Variation
McL = McLoone index
Gini = Gini Coefficient

Table 4

Regression analysis of the relationship between median value of housing (independent variable) and current expenditures per pupil (dependent variable)

	Statistic				
State	r	r2	Slope	T-statistic	F-ratio
AL	.2715	.0737	.0058	3.18**	10.10**
AR	.1136	.0129	.0052	2.04*	4.15*
DE	.5964	.3557	.0098	2.78**	7.73**
FL	.5422	.2940	.0139	5.20**	27.07**
GA	.4102	.1683	.0134	6.05**	36.61**
KY	.0245	.0006	.0007	0.316	0.100
LA	.4616	.2131	.0481	4.16**	17.33**
MD	.8370	.7066	.0143	7.18**	51.49**
MS	.1526	.0233	-.0052	-1.86	3.48
NC	.3501	.1226	.0081	4.26**	18.17**
OK	.4402	.1938	-.0154	-11.68**	136.51**
SC	.0332	.0011	.0010	0.314	0.099
TN	.1822	.0332	.0055	2.15*	4.60*
TX	.0714	.0051	-.0018	-2.32*	5.37*
VA	.8013	.6421	.0141	15.33**	234.99**
WV	.1718	.0295	-.0038	-1.27	1.61

* significant at the .05 level
** significant at the .01 level

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Table 5

Regression analysis of the relationship between median value of housing (independent variable) and core expenditures per pupil (dependent variable)

	Statistic				
State	r	r2	Slope	T-statistic	F-ratio
AL	.4233	.1792	.0065	5.27**	27.73**
AR	.2124	.0451	.0068	3.87**	15.01**
DE	.5130	.2632	.0067	2.24*	5.00*
FL	.5628	.3167	.0118	5.49**	30.13**
GA	.4872	.2374	.0108	7.51**	56.34**
KY	.1876	.0352	.0038	2.52	6.35
LA	.5820	.3387	.0218	5.73**	32.78**
MD	.8241	.6792	.0127	6.83**	46.58**
MS	.0656	.0043	-.0015	-0.797	0.636
NC	.3623	.1313	.0058	4.43**	19.66**
OK	.4707	.2216	-.0101	-12.72**	161.74**
SC	0	0	0	-0.011	0
TN	.1703	.0290	.0042	1.999*	3.998*
TX	.0624	.0039	-.0011	-2.02*	4.08*
VA	.8089	.6543	.0095	15.75**	247.92**
WV	.1308	.0171	-.0022	-0.960	0.921

* significant at the .05 level
** significant at the .01 level

Table 6

Regression analysis of the relationship between median income all households (independent variable) and current expenditures per pupil (dependent variable)

	Statistic				
State	r	r2	Slope	T-statistic	F-ratio
AL	.1738	.0302	.0106	1.99*	3.96*
AR	.0592	.0035	.0072	1.06	1.13
DE	.5687	.3234	.0352	2.59*	6.69*
FL	.1054	.0111	.0118	0.856	0.733
GA	.1145	.0131	.0097	1.55	2.41
KY	.0583	.0034	-.0038	-0.769	0.591
LA	.1183	.0140	-.0321	-0.954	0.909
MD	.7363	.5421	.0556	-3.01**	9.06**
MS	.2417	.0584	-.0157	-0.797	0.636
NC	.1520	.0231	.0111	1.753	3.07
OK	.4585	.2102	-.0388	-12.30**	151.16**
SC	.08	.0064	-.0071	-0.758	0.575
TN	.0245	.0006	.0020	0.273	0.075
TX	.1789	.0320	-.0115	-5.88**	34.59**
VA	.6016	.3619	.0467	8.62**	74.29**
WV	.0361	.0013	-.0023	-0.258	0.067

* significant at the .05 level
** significant at the .01 level

Table 7

Regression analysis of the relationship between median income all households (independent variable) and core expenditures per pupil (dependent variable)

	Statistic				
State	r	r2	Slope	T-statistic	F-ratio
AL	.3300	.1089	.0145	3.94**	15.53**
AR	.1584	.0251	.0134	2.86**	8.18**
DE	.5121	.2622	.0252	2.23*	4.97*
FL	.1556	.0242	.0143	1.26	1.61
GA	.2088	.0436	.0120	2.87**	8.26**
KY	.0728	.0053	.0033	0.963	0.927
LA	.1411	.0199	.0138	1.14	1.30
MD	.6974	.4863	.0477	4.56**	20.83**
MS	.1559	.0243	-.0066	-1.91	3.63
NC	.1817	.0330	.0092	2.12*	4.44*
OK	.5062	.2562	-.0263	-13.99**	195.64**
SC	.0943	.0089	-.0059	-0.894	0.799
TN	.0265	.0007	.0018	0.307	0.094
TX	.2145	.0460	-.0093	-7.10**	50.42**
VA	.6076	.3692	.0314	8.75**	76.67**
WV	.0640	.0041	.0032	0.466	0.218

* significant at the .05 level
** significant at the .01 level

Table 8

Regression analysis of the relationship between median value of housing (independent variable) and local revenue per pupil (dependent variable)

	Statistic				
State	r	r2	Slope	T-statistic	F-ratio
AL	.6168	.3804	.0171	8.83**	77.98**
AR	.4310	.1858	.0258	8.52**	72.58**
DE	.7329	.5371	.0216	4.03**	16.25**
FL	.7372	.5434	.0513	8.80**	77.35**
GA	.6757	.4566	.0357	12.33**	152.07**
KY	.7178	.5152	.0285	13.60**	184.93**
LA	.6716	.4511	.0294	7.25**	52.60**
MD	.9073	.8232	.0283	10.12**	102.47**
MS	.2956	.0874	.0117	3.74**	13.98**
NC	.7335	.5380	.0275	12.30**	151.37**
OK	.1863	.0347	.0055	4.52**	20.44**
SC	.5742	.3297	.0264	6.62**	43.78**
TN	.4592	.2109	.0171	5.99**	35.82**
TX	.5125	.2627	.0270	19.31**	372.67**
VA	.8766	.7684	.0251	20.85**	434.67**
WV	.4909	.2410	.0188	4.10**	16.83**

* significant at the .05 level
** significant at the .01 level

Table 9

Regression analysis of the relationship between median income all households (independent variable) and local revenue per pupil (dependent variable)

	Statistic				
State	r	r2	Slope	T-statistic	F-ratio
AL	.5543	.3072	.0434	7.50**	56.31**
AR	.3689	.1361	.0582	7.08**	50.11**
DE	.6810	.4638	.0753	3.48**	12.11**
FL	.5305	.2814	.1614	5.05**	25.45**
GA	.4362	.1903	.0596	6.52**	42.54**
KY	.6629	.4394	.0594	11.68**	136.38**
LA	.4897	.2398	.0557	4.49**	20.19**
MD	.8495	.7217	.1175	7.55**	57.06**
MS	.3055	.0903	.0229	3.81**	14.50**
NC	.6264	.3924	.0742	9.16**	63.95**
OK	.1353	.0183	.0096	3.25**	10.59**
SC	.4455	.1985	.0624	4.69**	22.04**
TN	.3410	.1162	.0347	4.20**	17.61**
TX	.4691	.2201	.0634	17.18**	259.14**
VA	.7329	.5371	.0925	12.33**	151.97**
WV	.5832	.3401	.0654	5.23**	27.32**

* significant at the .05 level
** significant at the .01 level

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Table 10

Regression analysis of the relationship between median value of housing (independent variable) and state revenue per pupil (dependent variable)

	Statistic				
State	r	r2	Slope	T-statistic	F-ratio
AL	.1122	.0126	-.0015	-1.27	1.62
AR	.3072	.0944	-.0095	-5.76**	33.13**
DE	.4792	.2296	-.0011	-2.04	4.17
FL	.6226	.3876	-.0271	-6.41**	41.14**
GA	.5914	.3498	-.0114	-9.87**	97.39**
KY	.8231	.6775	-.0190	-19.12**	365.54**
LA	.3342	.1117	-.0054	-2.84**	8.05**
MD	.7925	.6281	-.0088	-6.10**	37.16**
MS	.3720	.1384	-.0060	-4.84**	23.45**
NC	.4176	.1744	-.0056	-5.24**	27.46**
OK	.6210	.3856	-.0168	-18.88**	356.54**
SC	.7085	.5020	-.0134	-9.47**	89.70**
TN	.4544	.2065	-.0037	-5.90**	34.86**
TX	.5620	.3159	-.0249	-21.98**	483.05**
VA	.8731	.7623	-.0080	-20.50**	420.05**
WV	.3059	.0936	-.0123	-2.34*	5.48*

* significant at the .05 level
** significant at the .01 level

Table 11

Regression analysis of the relationship between median income all households (independent variable) and state revenue per pupil (dependent variable)

	Statistic				
State	r	r2	Slope	T-statistic	F-ratio
AL	.0894	.0080	-.0034	-1.01	1.02
AR	.1616	.0261	-.0132	-2.92**	8.53**
DE	.3965	.1572	-.0342	-1.62	2.61
FL	.5828	.3397	-.0110	-5.78**	33.44**
GA	.4691	.2201	-.0234	-7.15**	51.07**
KY	.8284	.6862	-.0432	-19.51**	380.57**
LA	.1077	.0116	-.0045	-0.87	0.754
MD	.7442	.5538	-.0365	-5.23**	27.30**
MS	.3237	.1048	-.0100	-4.13**	17.09**
NC	.4583	.2100	-.0193	-5.88**	34.56**
OK	.5321	.2831	-.0349	-14.98**	224.26**
SC	.4306	.1854	-.0248	-4.50**	20.25**
TN	.4338	.1882	-.0096	-5.57**	31.06**
TX	.5216	.2721	-.0592	-19.77**	390.97**
VA	.7994	.6391	-.0321	-15.23**	231.99**
WV	.3977	.1582	-.0468	-3.16**	9.96**

* significant at the .05 level
** significant at the .01 level

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Table 12

Goals 2000 Funding Allocations - April 1996

	Funding Allocation		
	FY 1994	FY 1995	1996 Estimates
AL	1,601,966	5,941,766*	5,681,050
AR	991,579	3,650,495	3,437,883
DE	405,701	1,291,544	1,244,037
FL	4,026,309	15,861,034	14,726,761
GA	2,360,624	8,959,402*	8,522,610
KY	1,477,200	5,775,274	5,554,441
LA	2,066,082	7,968,128	7,648,916
MD	1,448,309	5,379,938	5,020,587
MS	1,359,516	5,094,972	4,869,221
NC	2,062,239	7,745,087	7,286,808
OK	1,153,998	4,396,613*	4,180,457
SC	1,274,631	4,710,359	4,515,649
TN	1,677,460	6,387,802	6,004,805
TX	7,293,999	29,228,278	27,211,732
VA	0	6,658,924*	6,205,836
WV	778,396	2,799,259	2,790,910

Source: Rice CMS Gopher 2.4.2 (inet.ed.gov).

* Have not yet applied for second year funding

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